

REMARKS

Claims 1-23 were pending in the application. Claims 18-23 are canceled. Claims 1-17 are now pending in the application.

The specification is amended to include cross-reference to related applications and USPTO recommended headings and subheadings.

Claims 1-17 are amended to improve the quality of the original translation from German into English, to remedy lack of insufficient antecedent basis, and to conform to common U.S. practice for claims recitations.

Claim 1 is additionally amended to specify that the microstructure units (6) separate the linking channel (3) into two or more part channels immediately before opening into the mixing zone. Support for this amendment may be found throughout the specification. For example, support may be found on page 2, in the last complete paragraph, which describes part channels as the “division of the feed stream into part streams by built-in microstructure parts just before the outflow of said feed stream into the mixing zone.” Further support may be found in Figures 1-5 and their corresponding descriptions in the specification.

No new matter is added.

Double Patenting Rejections

Claims 1-17 are provisionally rejected for being obvious over claims 20-30 and 49 of copending application number 10/563,191. In response to the provisional rejection, Applicant files, herewith, a terminal disclaimer. Accordingly, Applicant

respectfully requests that the provisional obviousness-type double patenting rejection of claims 1-17 be withdrawn.

Claims 1-17 are provisionally rejected for being obvious over claims 1-19 of copending application number 10/563,354. In response to the provisional rejection, Applicant files, herewith, a terminal disclaimer. Accordingly, Applicant respectfully requests that the provisional obviousness-type double patenting rejection of claims 1-17 be withdrawn.

Claims Rejections 35 U.S.C. 103

Claims 1-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ehrfeld** et al. (US 2003/0039169 A1). Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ehrfeld** in view of **Swift** et al. (US 4,516,632). Claim 16 is also rejected as being unpatentable over **Ehrfeld** in view of **Hemker** (US 3,856,270). The Examiner's rejections have been carefully considered.

Applicant argues that claims 1-17 are not unpatentable over Ehrfeld or Erhfel in view of Swift or Hemker because the cited references, neither individually nor in combination, teach or suggest microstructure units (6) that divide a linking channel into two or more part channels immediately before opening into a mixing zone.

The rejection cites figure 3a and paragraph 51 in Ehrfeld as teaching microstructure units (6) that divide a linking channel into two or more part channels before opening into a mixing zone.

The disk shown in Figure 3a of Ehrfeld does not show microstructure units that divide a (single) linking channel into two or more part channels, as recited in present claims 20 and 49. Rather, the disk of the referenced art shows an inlet channel that is

sequentially bifurcated to produce multiple separate channels that open into a mixing zone.

There is no structure present in Fig 3a or described in the text of Ehrfeld that can reasonably be confused with the microstructure units recited in the present claims. The terms "microstructure unit" and "microstructure part" are described and defined in the context of a linking channel in the present claims and specification. Microstructure units and part channels are described in the last paragraph on page 2 of the present specification. A part channel is formed by the division of a feed stream into part streams by microstructure parts just before the outflow of the feed stream into the mixing zone. This description is in agreement with the language recited in the present claims.

Ehrfeld describes a structure that is clearly structurally distinct from any structure recited in the present claims. Paragraph 51 in Ehrfeld teaches that a supply channel is sequentially bifurcated in stages to form a plurality of microchannels.

The micromixer taught by Ehrfeld requires at least two stages of bifurcations in fluid streams leading to a mixing zone (abstract). The sequential bifurcation of a channel into a plurality of distinct microchannels before outflow into a mixing zone cannot reasonably be equated with a single channel that is divided into a plurality of part channels by microstructures just before outflow into a mixing zone. A "bifurcation" as described Ehrfeld is clearly the separation of one channel into two channels. As such, a "bifurcation" cannot be confused with a "microstructure unit." Similarly, daughter "channels" formed by the bifurcation of a parent channel, as described in Ehrfeld, cannot be confused with "part channels" formed by microstructure units at the opening of a channel into a mixing zone, as described in the present specification.

In view of the foregoing arguments, Applicant respectfully requests that the rejection of claims 1-17 under 35 U.S.C. 103(a) be withdrawn.

Conclusion

The application in its amended state is believed to be in condition for allowance. Action to this end is courteously solicited. Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully Submitted,



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